ANNUAL REPORT OF THE CENTRAL METEOROLOGICAL OBSERVATORY OF JAPAN

FOR

THE YEAR 1909.

PART II.

ON

THE BAROMETRIC DEPRESSIONS

IN

THE YEAR 1909.

PUBLISHED BY THE CENTRAL METEOROLOGICAL OBSERVATORY,

TOKIO.

1918.

THE BAROMETRIC DEPRESSIONS IN THE YEAR 1909.

JANUARY.

1. *Jan. 3–4.* Continental cyclone from the Yangtse-valley.
2. *Jan. 8–10.* Barometric depression from the Riukiu islands.
3. *Jan. 16–19.* Barometric depression from the Eastern sea of China.
4. *Jan. 18–20.* Continental cyclone from the Yangtse-valley.
5. *Jan. 23–26.* Barometric depressicn from thc Pacific to the south of the Yaeyama islands.
6. *Jan. 24–26.* Barometric depression from the Pacific to the east of Luzon.
7. *Jan. 27–30.* Continental cyclone from Mongolia.

FEBRUARY.

8. *Jan. 1–Feb. 2.* Barometric depression from the neighbourhood of the Yaeyama islands.
9. *Feb. 2–4.* Barometric depression from the Eastern sea of China.
10. *Feb. 3–4.* Barometric depression from the southern part of the Japan sea.
11. *Feb. 10–11.* Barometric depression from the Yaeyama islands.
12. *Feb. 11–12.* Continental cyclone from Amur province.
13. *Feb. 13–16.* Continental cyclone from Mongolia.
14. *Feb. 16–17.* Continental depression from Manchuria.
15. *Feb. 16–17.* Barometric depression from the Yellow sea.
16. *Feb. 18–21.* Continental cyclone from the Hoangho-valley. This cyclone caused a heavy snowstorm over Hokkaido on the 20th.
17. *Feb. 18–19.* Continental cyclone fram the Yangtse-valley.
18. *Feb. 23–25.* Barometric depression from the Yaeyama islands.
19. *Feb 24–25.* Barometric depression from Shikoku, Southern Japan.
20. *Feb. 27–28.* Barometric depression from the Pacific to the south of the Okinawa islands.

MARCH.

21. *March 1–3.* Continental cyclone from Mongolia.
22. *March 1–3.* Continental cyclone from the Yangtse-valley.
23. *March 5–6.* Continental cyclone from Szechwan, Western China.
24. *March 5–7.* Barometric depression frm North Korea.
25. *March 8–10.* Barometric depression from the sea off the south coast of Formosa.

26. *March 9—10.* Continental cyclone from the Yangtse-valley.

27. *March 11—13.* Continental cyclone from South China. This cyclone travelled along our south coast, causing a heavy gale and rough sea. At Kobe about 20 houses were destructed.

28. *March 15—17.* Barometric depression from Northern Formosa.

29. *March 18—21.* Barometric depression from the sea to the south of Formosa.

30. *March 22—24.* Continental cyclone from the Yangtse-valley.

31. *March 22—24.* Barometric depression from Northern Formosa.

32. *March 22—25.* Continental cyclone from Mongolia.

33. *March 28—30.* Barometric depression from the Pacific to the south of the Yaeyama islands.

APRIL.

34. *April 4—8.* Continental cyclone from the Yangtse-valley. This cyclone caused a heavy rainstorm over Japan.

35. *April 5—8.* Barometric depression from the neighbourhood of Formosa.

36. *April 8—11.* Continental cyclone from Mongolia.

37. *April 9—11.* Continental cyclone from North China.

38. *April 17—21.* Continental cyclone from the Yangtse-valley. During the visitation of this cyclone a heavy rainstorm prevailed in Northern Japan. Several rivers flooded over their banks, and railway communication was temporarily suspended.

39. *April 26—30.* Continental cyclone from the Yangtse-valley.

MAY.

40. *May 5—8.* Barometric depression from the Eastern sea.

41. *May 15—17.* Barometric depression from the sea to the south of Formosa.

42. *May 15—17.* Barometric depression from the Eastern sea of China.

43. *May 18—21.* Continental cyclone from Mongolia.

44. *May 19—22.* Continental cyclone from Siberia.

45. *May 24—27.* Barometric depression from the neighbourhood of the Yaeyama islands.

46. *May 25—27.* Continental cyclone from thc lower Yangtse–valley.

JUNE.

47. *June 1—6.* Continental cyclone from the Yangtse-valley.

48. *June 5—6.* Continental cyclone from North Korea.

49. *June 8—10.* Continental cyclone from the upper Yangtse-valley.

50. *June 8—10.* Continental cyclone from Mongolia.

51. *June 13—15*. Continental cyclone from the Yangtse-valley. This cyclone caused a heavy rainstorm over Japan. At Miyako, Eastern Japan the glass fell as low as 736.7mm * on the 14th, at 4p.m.

52. *June 17—19*. Barometric depression from the neighbourhood of Formosa.

53. *June 18—20*. Continental cyclone from the Yangtse-valley.

54. *June 20—22*. Continental cyclone from the Pacific to the south of the Yaeyama islands.

55. *Juue 22—24*. Barometric depression from Formosa.

56. *June 26—27*. Barometric depression from the Eastern sea of China.

57. *June 27—28*. Continental cyclone from Mongolia.

58. *June 28—30*. Barometric depression from the sea to the southeast of Formosa.

59. *June 28—30*. Continental cyclone from the Yangtse-valley.

JULY.

60. *July 1—2*. Barometric depression from the neighbourhood of the Yaeyama islands.

61. *July 1—3*. Continental cyclone from the Yangtse-valley.

62. *July 3—6*. Barometric depression from the neighbourhood of Formosa.

63. *July 5—8*. Continental cyclone from the Yangtse-valley.

64. *July 10—13*. Continental cyclone from the Yangtse-valley.

65. *July 13—15*. Continental cyclone from the Yangtse-valley.

66. *July 16—19* Continental cyclone from North China.

67. *July 17—19*. Continental cyclone from Mongolia.

68. *July 25—26*. Continental cyclone from Amur province.

69. *July 25—26*. Continental cyclone from Manchuria.

70. *July 29—Aug. 2*. Typhoon from the Pacific to the northeast of Luzon. This typhoon crossed Southern Kiushiu, causing a severe rainstorm there.

AUGUST.

71. *Aug. 3—10*. Typhoon from the Bonin islands. This typhoon crossed Kiushiu, causing a very severe storm of wind and rain.

72. *Aug. 3—4*. Typhoon of the Riukiu islands.

73. *Ang. 4—9*. Typhoon of the Riukiu islands. At Nafa the barometer fell to 736.6mm on the 5th, at 3p.m.

74. *Aug. 8—15*. Typhoon of the Riukiu islands.

75. *Aug. 12—20*. Continental cyclone from the Yangtse-valley.

76. *Aug. 24—27*. Continental cyclone from North China.

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* All the barometric readings given in the text have been reduced to sea level and to standard gravity.

77. *Aug. 29–31.* Continental cyclone from North China.

SEPTEMBER.

78. *Sept. 7–15.* Typhoon from the Mariana-islands.
79. *Sept. 10–13.* Barometric depression from the Bonin islands.
80. *Sept. 14–19.* Typhoon from the Caroline islands. This typhoon crossed Northern Formosa,causing a very severe rainstorm there.
81. *Sept. 21–25.* Barometric depression from Formosa.
82. *Sept. 24–25.* Secondary cyclone from Northern Kiushiu.
83. *Sept. 25–27.* Barometric depression from Formosa.
84. *Sept. 26–28.* Continental cyclone from North China.
85. *Sept. 26–28.* Continental cyclone from North China.
86. *Sept. 28–30.* Continental cyclone from the Yangtse-valley.
87. *Sept. 29–30.* Continental cyclone from the Eastern sea of China.

OCTOBER.

88. *Oct. 5–6.* Continental cyclone from Manchuria.
89. *Oct. 6–8.* Typhoon from the Pacific to the east of Luzon.
90. *Oct. 9–12.* Continental cyclone from Siberia.
91. *Oct. 13–15.* Continental cyclone from North Korea.
92. *Oct. 18–19.* Continental cyclone from the Yangtse-valley.
93. *Oct. 21–23.* Barometric cyclone from Formosa.
94. *Oct. 25–26.* Continental cyclone from the Yangtse-valley.

NOVEMBER.

95. *Nov. 2–5.* Barometric depression from Formosa.
96. *Nov 3–4.* Continental cyclone from the Yangtse-valley.
97. *Nov. 9–10.* Continental cyclone from South China.
98. *Nov. 16–18.* Continental cyclone from Mongolia.
99. *Nov. 16–17.* Continental cyclone from Northern Mongolia.
100. *Nov. 19–21.* Continental cyclone from Mongolia
101. *Nov. 19–20.* Continental cyclone from North Korea.
102. *Nov. 23–24.* Barometric depression from the Riukiu islands.
103. *Nov. 23–25.* Continental cyclone from the Yangtse-valley.
104. *Nov. 24–25.* Barometric depression from the southern part of the Japan sea.
105. *Nov. 28–30.* Continental cyclone from Siberia.
106. *Nov. 23–25.* Continental cyclone from Northern Manchnria.
107. *Nov. 28–30.* Continental cyclone from Siberia

108. *Nov. 28—30.* Barometric depression from the southern part of the Japan sea.

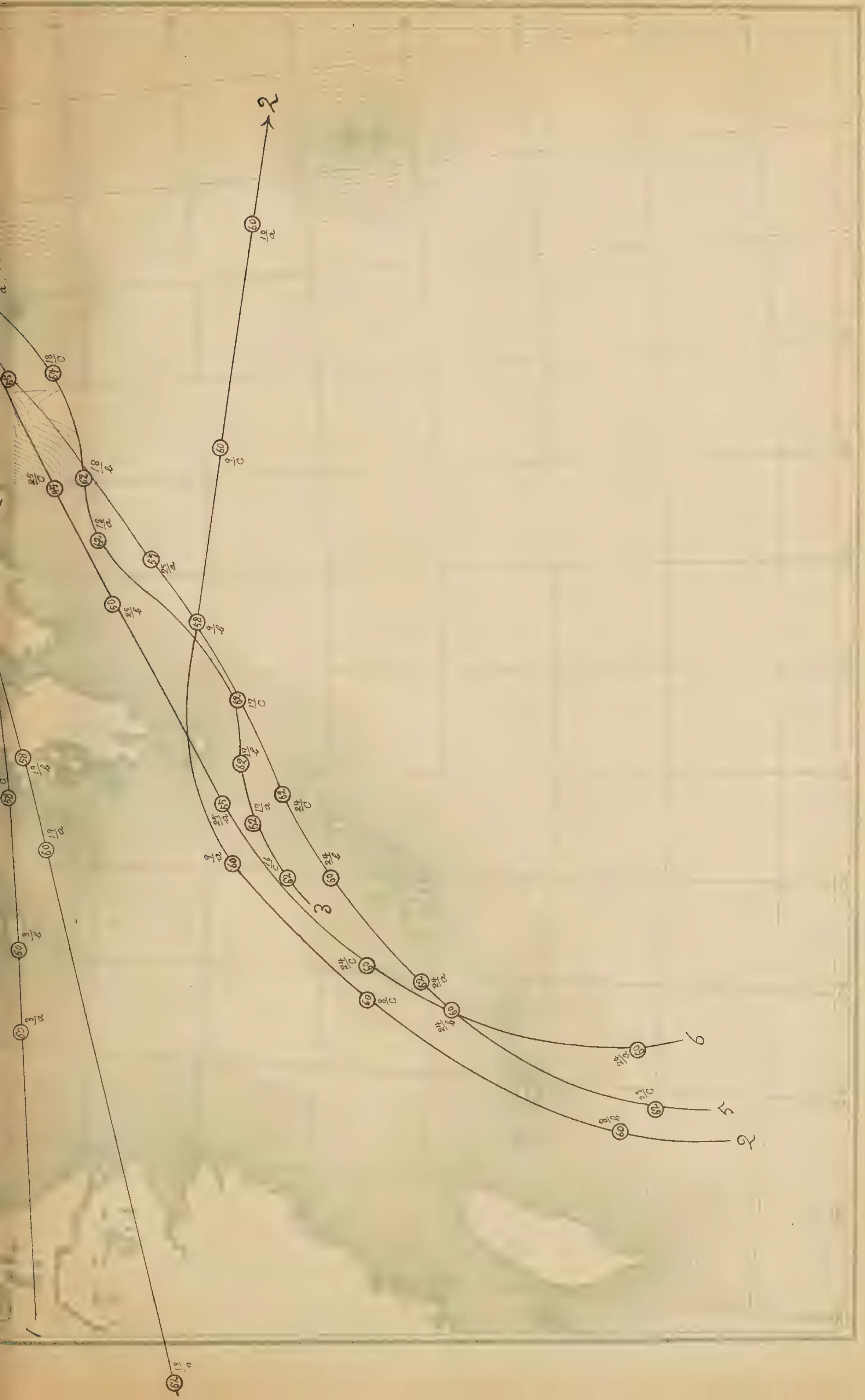
DECEMBER.

109. *Dec. 4—5.* Continental cyclone from the Yangtse-valley.
110. *Dec. 12—15.* Continental cyclone from Manchuria.
111. *Dec. 11—13.* Continental cyclone from North China.
112. *Dec. 11—13.* Barometric depression from Formosa.
113. *Dec. 18—21.* Continental cyclone from Manchuria.
114. *Dec. 20—22.* Continental cyclone from North China.
115. *Dec. 22—23.* Continental cyclone from Manchuria.
116. *Dec. 22—24.* Continental cyclone from North China.
117. *Dec. 29—30.* Continental cyclone from the Yangtse-valley.
118. *Dec. 29—31.* Continental cyclone from the Yangtse–valley.
119. *Dec. 30—Jan. 2, 1910.* Continental cyclone from the Yangtse–valley. This cyclone caused a severe snowstorm over Northern Japan.
120. *Dec. 31—Jan. 1, 1910.* Continental cyclone from the Yangtse–valley.
121. *Dec. 30—Jan. 1, 1910.* Continental cyclone from the Yangtse–valley.

Note.— The tracks of all the barometric depressions given in the text are exhibited on the charts at the end of this volume. Those of more important typhoons and cyclones are given in thick lines. Each of the small circles in the tracks indicates the position of the storm–centre on the date specified by the figures printed near the circle, and at the hour specified by *a*, *b* and *c*, *a* meaning 6 a.m., *b* 2p.m and *c* 10p.m. Thus 5/*a* means "On the 5th, at 6a.m." and 27/*b* "On the 27th, at 2p.m."

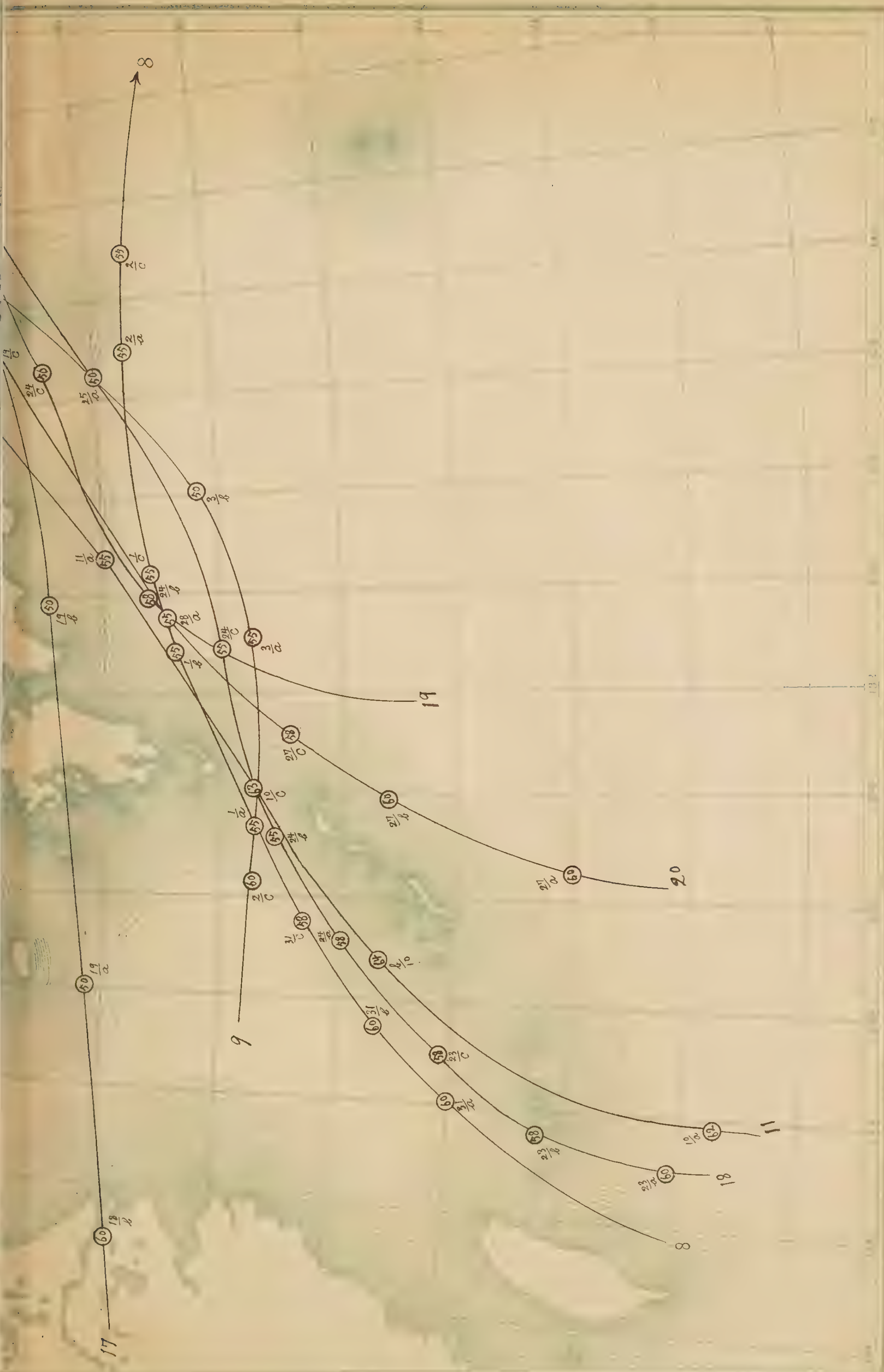
PL. I.





PL. II.





PL. III.

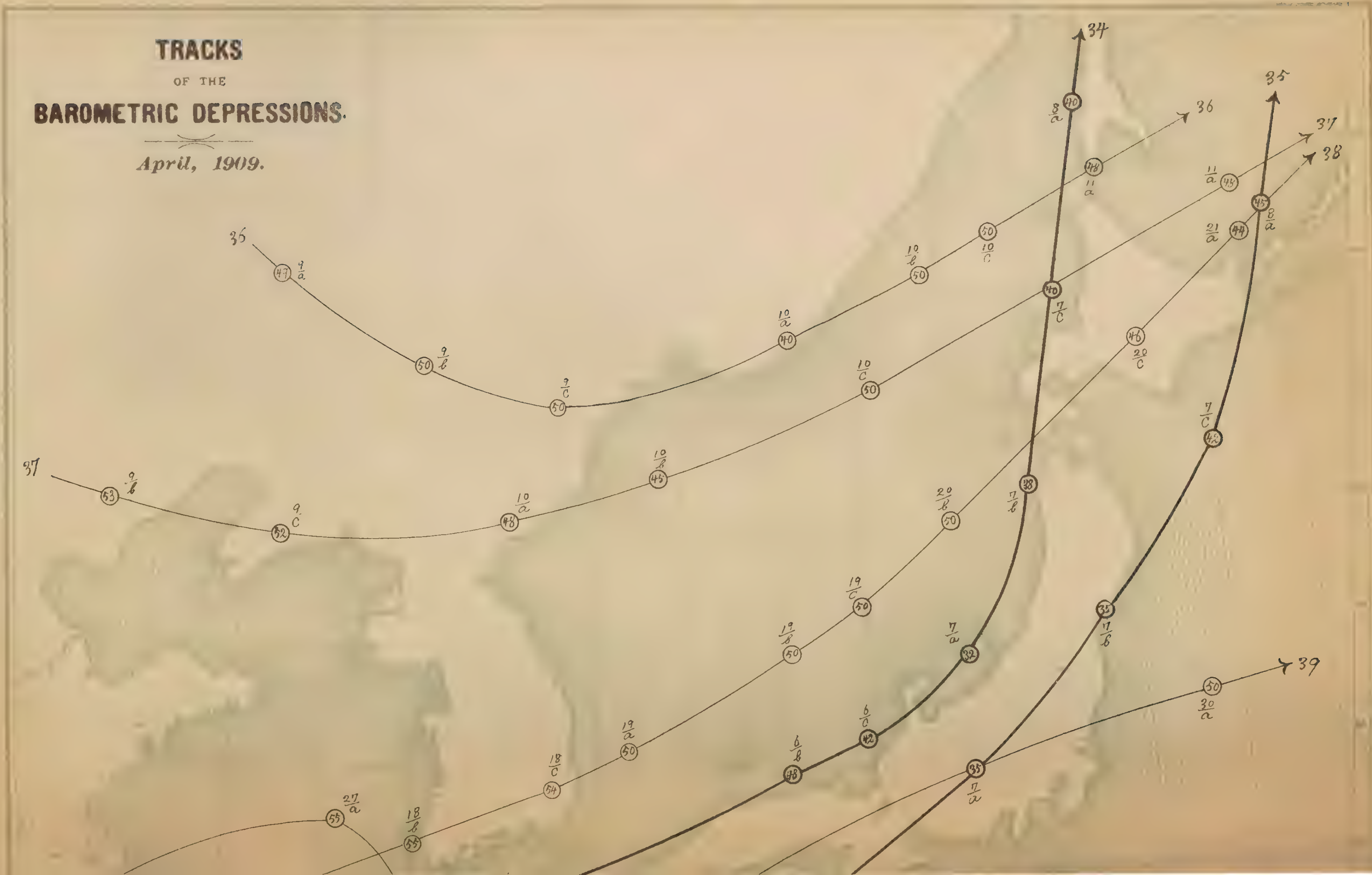
TRACKS
OF THE
BAROMETRIC DEPRESSIONS.

March, 1909.





PL. IV.



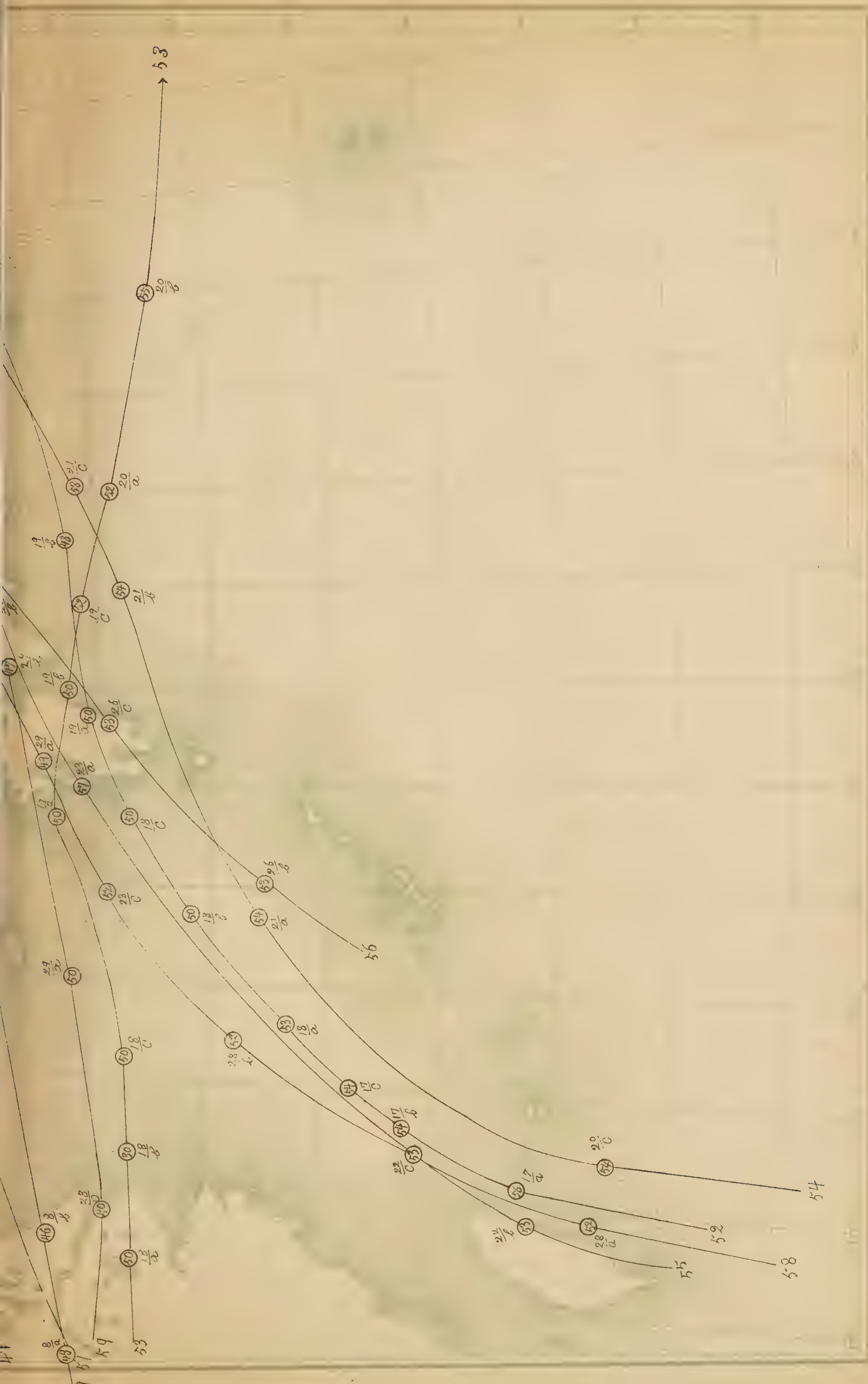



TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
May, 1909.
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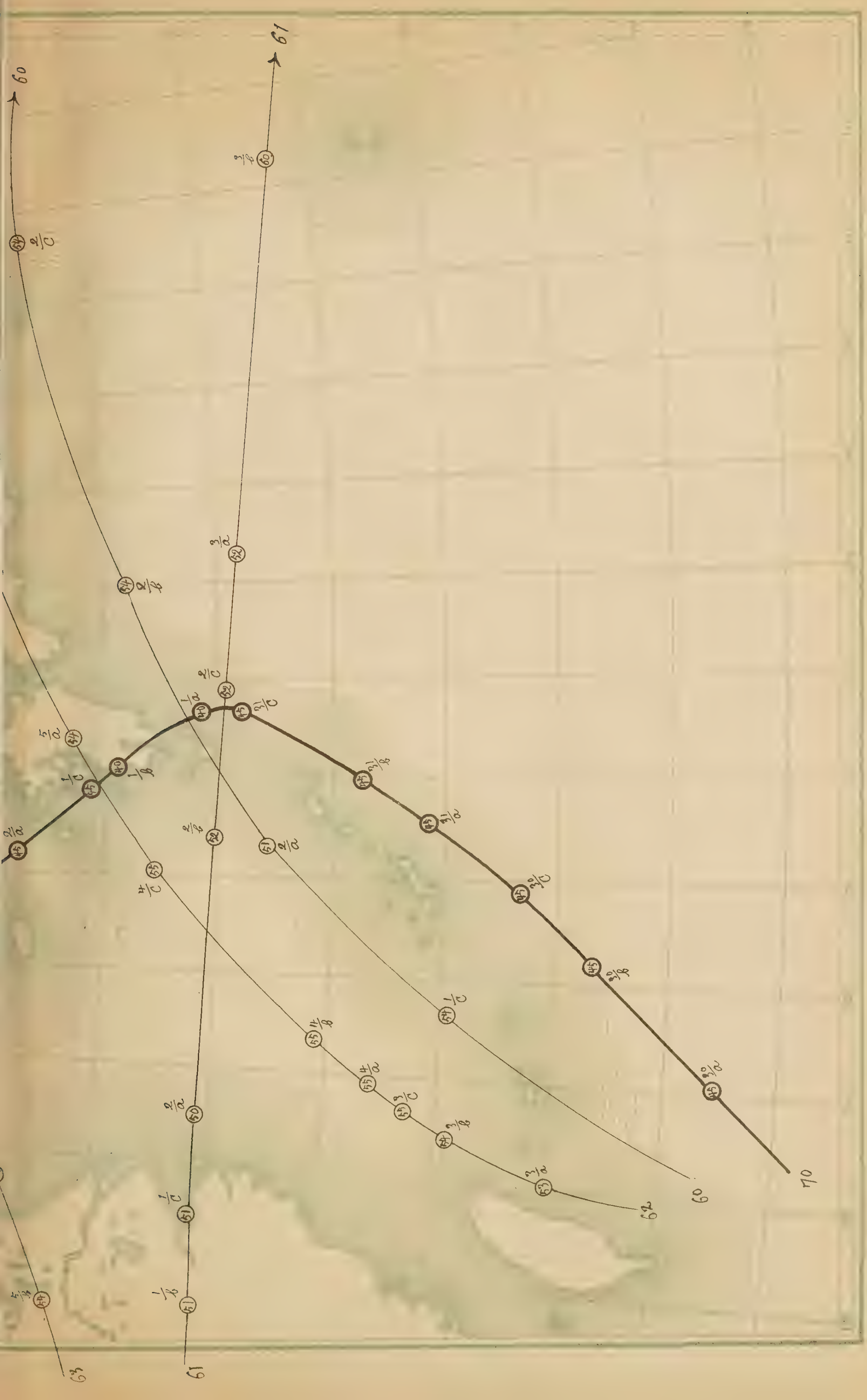

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PL. VI.



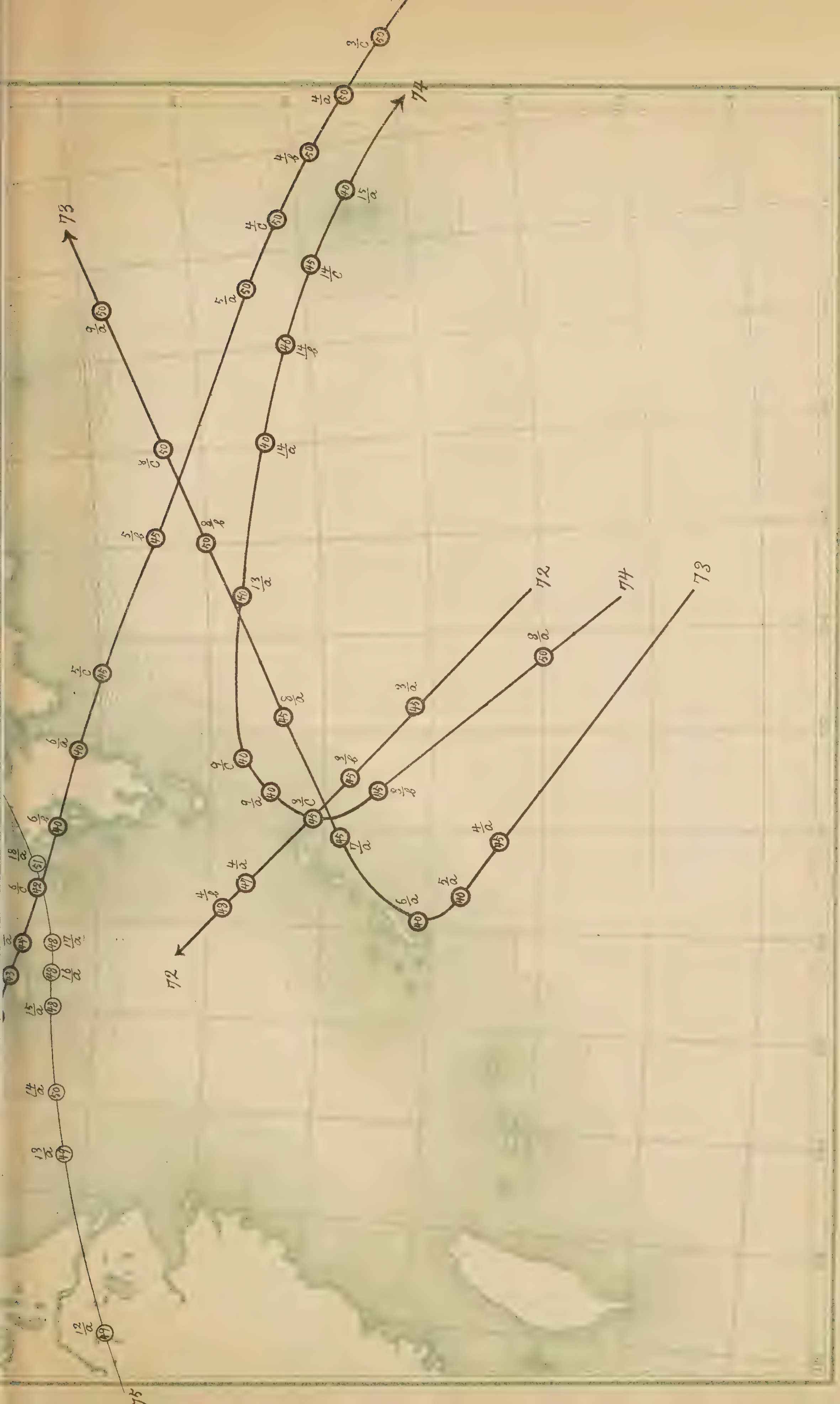



TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
July, 1909.
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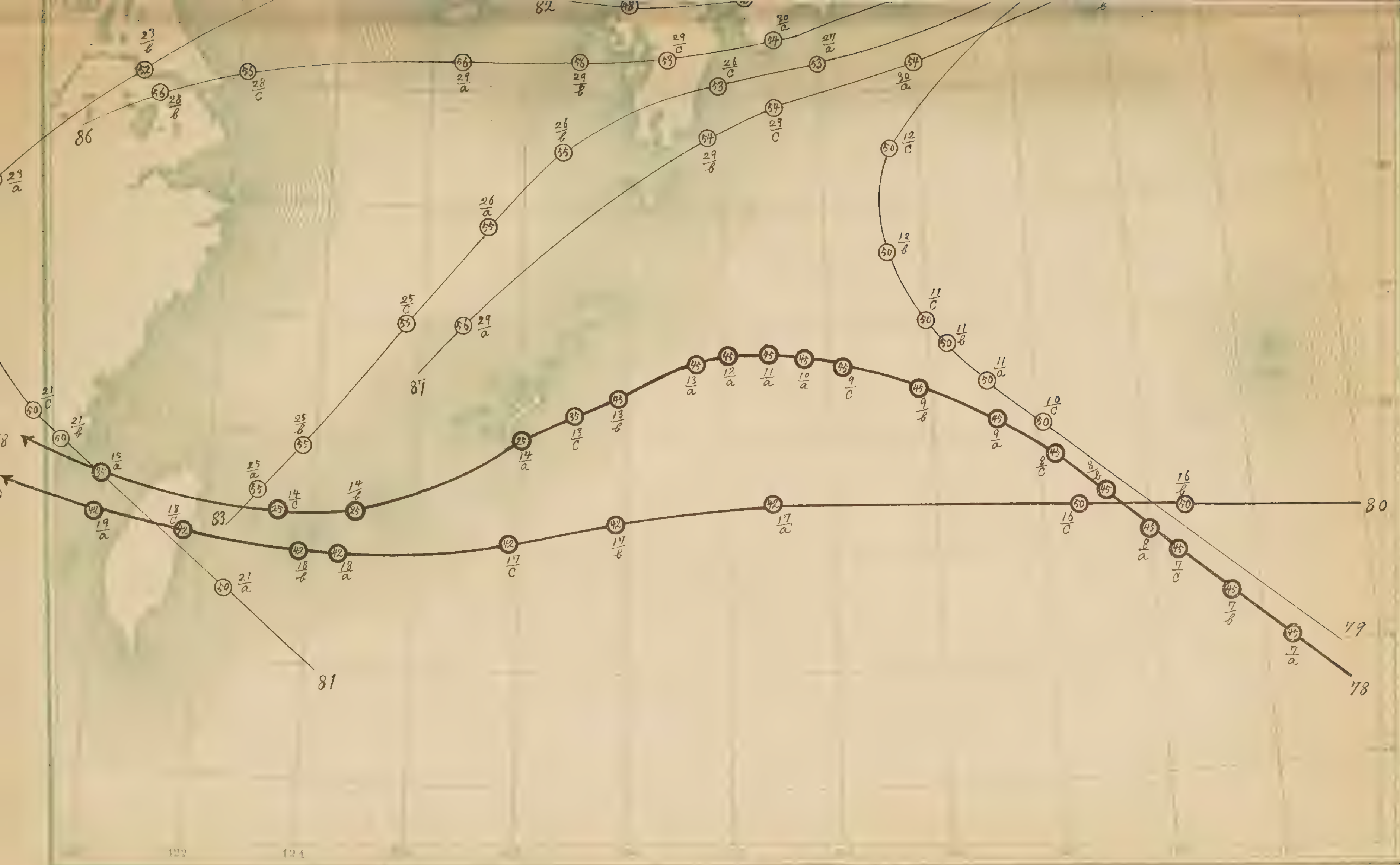
PL. VIII.




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PL. IX.

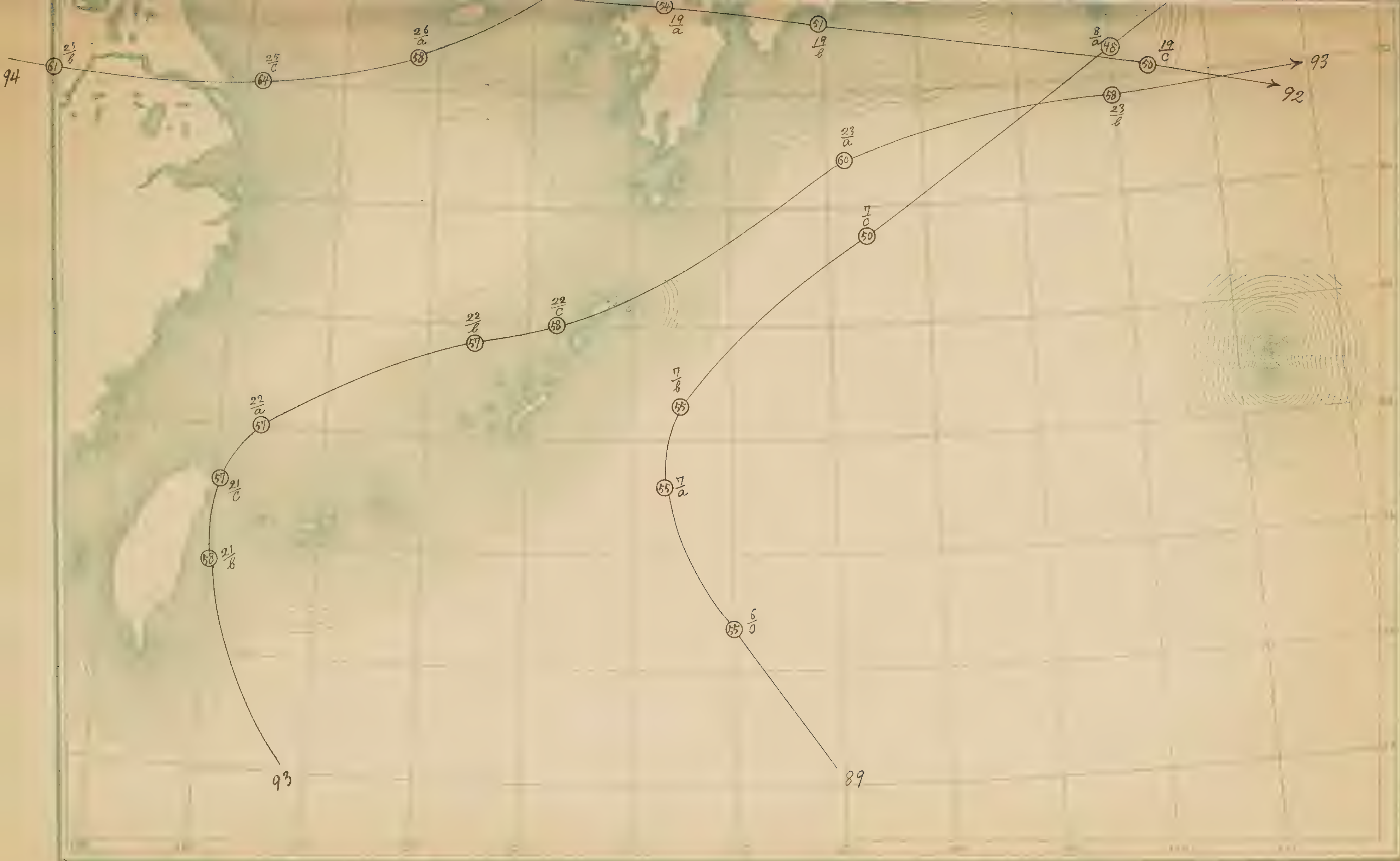

TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
September, 1909.
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PL. X.


TRACKS
OF THE
BAROMETRIC DEPRESSIONS.
October, 1909.
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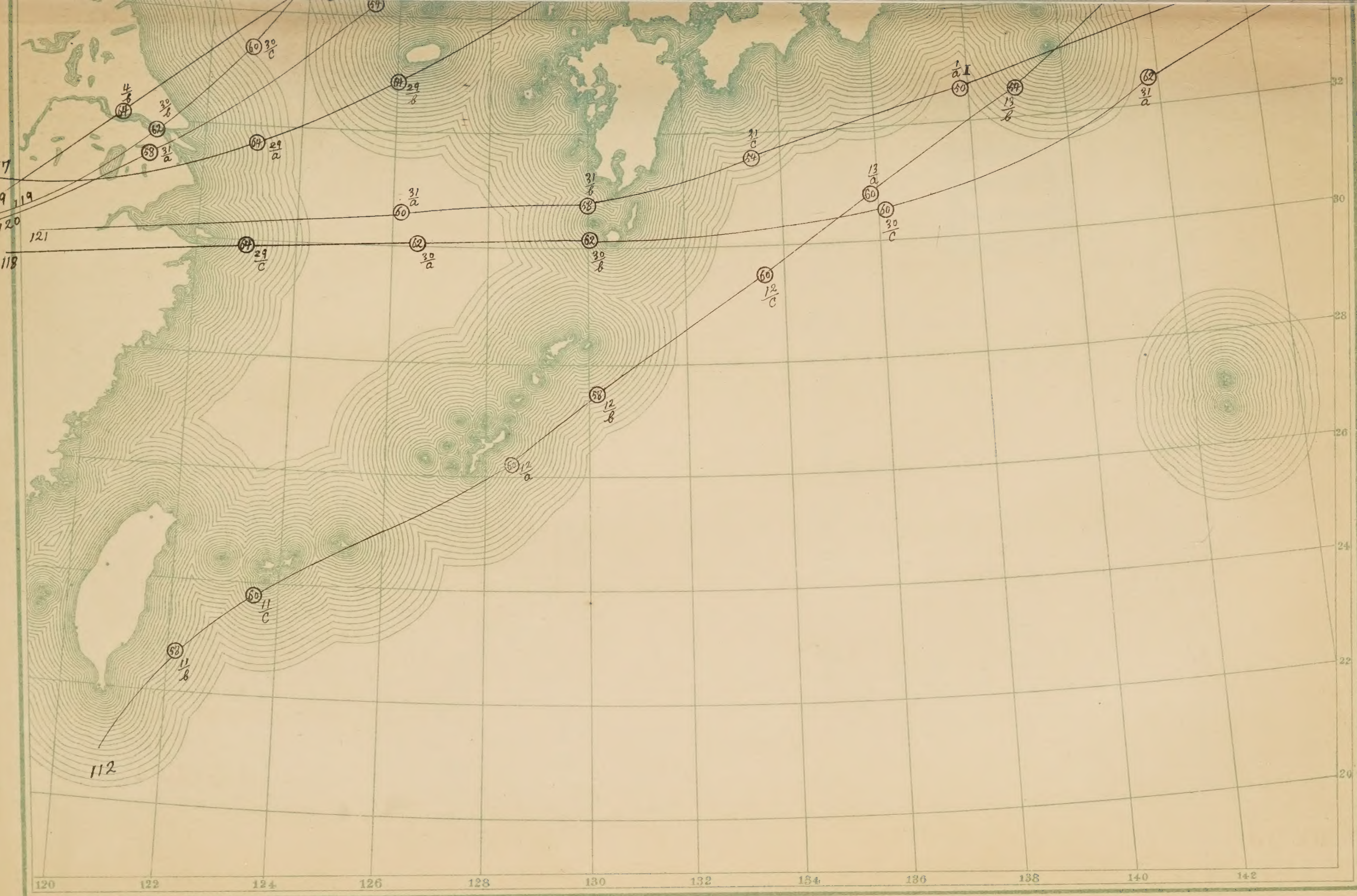
PL. XI.




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PL. XII.




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